No. 95-2033 (2)

Supreme Court, U.S.
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IN THE
Supreme Court of the United States
OCTOBER TERM, 1996

BP CHEMICALS LIMITED and
STERLING CHEMICALS, INC.,
Petitioners,

v.

HOECHST CELANESE CORPORATION,
Respondent.

On Petition for Writ of Certiorari to the United States Court of Appeals for the Federal Circuit

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BRIEF IN OPPOSITION

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QUESTIONS PRESENTED

1) Where the only disputed claim limitation in the '806 patent required a "macroreticulated strong-acid cation exchange resin" that was "stable" and where the term "stable" was defined in the '806 patent specification as one that will not "change more than about 50 percent of its dry physical dimension upon being exposed to the organic medium," did the court of appeals, the district court and the jury all correctly conclude as a matter of law that the term "dimension" in the specification signified a linear measurement (*e.g.*, diameter) rather than volume (*i.e.*, a product of three dimensions) so that the petitioners' use of a resin which changed less than 50% in linear dimension in acetic acid literally infringed the '806 patent?

2) Should this Court decline to reach or address the alternative question presented concerning infringement under the doctrine of equivalents where (a) the judgment of infringement is fully supported by the lower courts' correct determination that the petitioners literally infringed the patent-in-suit, (b) where the requested relief in the petition, even if granted, would still necessitate a remand for a new trial on the issue of literal infringement, and (c) where the petitioners were correctly held by the court of appeals to have waived any objection to sufficiency of the evidence pertaining to the doctrine of equivalents?

LIST OF PARTIES AND RULE 29.6 STATEMENT

The parties to the proceeding in the United States Court of Appeals for the Federal Circuit were petitioners BP Chemicals Limited and Sterling Chemicals, Inc. and respondent Hoechst Celanese Corporation. For purposes of S. Ct. R. 29.6, respondent Hoechst Celanese Corporation states that the following parent and subsidiary (except wholly-owned subsidiaries) companies have issued shares to the public:

Hoechst Celanese Chemical Group, Inc.
Hoechst AG
Copley Pharmaceutical, Inc.
Celanese Canada, Inc.
Celanese Mexicana S.A.

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BRIEF IN OPPOSITION

Respondent Hoechst Celanese Corporation ("Celanese") respectfully requests that this Court deny the petition for a writ of certiorari seeking review of the Federal Circuit's decision in this case. The Federal Circuit's opinion is reported at 78 F.3d 1575 (Fed. Cir. 1996), and is found at Petitioners' Appendix ("Pet. App.") 1a-17a. The district court's opinion, which was affirmed by the Federal Circuit's opinion at issue, that denied the post-trial motions of BP Chemicals Limited and Sterling Chemicals, Inc. (collectively "petitioners") for judgment as a matter of law ("JMOL") after a jury verdict of willful infringement in favor of Celanese is reported at 846 F. Supp. 542 (S.D. Tex. 1994), and is found at Pet. App. 18a-33a.

STATUTE INVOLVED

Petitioners have asserted that the pertinent statutory provision applicable to this case is 35 U.S.C. § 112, despite their admission that they stipulated before the district court in the pretrial order that the provisions of section 112 were satisfied by the '806 patent. *See* Pet. 5 n.3. In light of that concession by petitioners, Celanese respectfully submits that no statutory provision is implicated by the present petition, which raises a case-specific challenge to the lower courts' correct interpretation of the term "dimension" in the '806 patent specification. In addition, the petition attempts to implicate the viability and applicability of the judicially-created doctrine of equivalents, which is non-statutory and only an alternative basis for the judgment based on petitioners' willful literal infringement in this case.

STATEMENT OF THE CASE

A. The Patent-In-Suit

In 1978, a Celanese scientist, Charles B. Hilton, discovered a highly effective method for quickly removing iodide ions from non-aqueous organic liquids by passing the organic liquid over a silver-charged, macroreticulated, strong acid, cation exchange resin. By reducing the iodide level in acetic acid to less than one part per *billion* (about one droplet in a tank truck of acetic acid), the claimed process prevents the iodide from later "poisoning" the catalyst used when the acetic acid is converted to vinyl acetate in a "downstream" process.

In practicing the claimed method, suitable resin beads are placed in a vessel known as a "guard bed." As the acetic acid moves through the guard bed, a chemical reaction between silver on the resin surface and iodide in the acetic acid traps the iodide on the resin. Celanese filed a patent application claiming Dr. Hilton's invention in March 1985. Two months later, Celanese installed the guard bed in its Clear Lake, Texas plant.

The '806 patent issued on October 7, 1986. As originally filed in the PTO, the broadest claim in Celanese's application read as follows:

> A method for removing iodide compounds from a non-aqueous organic medium comprising contacting the medium containing said iodide compounds with an ion exchange resin characterized in that the resin is a macroreticulated strong-acid cation exchange resin which is stable in the organic medium and has at least one percent of its active sites converted to the silver or mercury form.

The patent examiner allowed that as claim 1 without amendment. The two claims at issue during trial, claims 2 and 6, include all of the same limitations and are thus dependent from claim 1.[1]

The '806 patent teaches that resin beads for use in the claimed method must be "macroreticulated" or "macroreticular," *i.e.*, porous. Macroreticulated resins are synonymously known as "macroporous" resins and are made with a "porogen" which allows pores (*i.e.*, holes) to form in the surface of the resin beads which increases the net surface area. At the time of the '806 patent application, the only other type of ion exchange resin was known as a gel resin, made without a porogen and having no pores. Silver-charged "gel" resins had been used to remove iodide from aqueous media prior to Dr. Hilton's invention, but processes using gel resins were too slow for practical application with acetic acid.

The '806 patent discloses that a preferred ion-exchange resin for use in the practice of the invention is "a macroreticulated resin comprised of a sulfonated copolymer of

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[1] In a reexamination proceeding (*see* 35 U.S.C. §§ 302-05) initiated by BP after this lawsuit was filed, the '806 claims were reaffirmed as patentable by the United States Patent and Trademark Office ("PTO") after the trial concluded, but before the appeal to the Federal Circuit. On July 11, 1996, the '806 claims were again upheld without amendment by the PTO in two additional reexamination proceedings.

styrene and divinylbenzene." The patent then discloses that the "most preferred" resin is manufactured by Rohm & Haas and is available under the trademark Amberlyst® 15. The '806 specification includes a table with information about Amberlyst® 15 published by Rohm & Haas, including a representative distribution of the diameter (mesh size) of the dry resin beads and the percent swelling from the dry state to the solvated state in a variety of media, such as hexane, ethyl acetate, and water.

The '806 patent further explains that most macroreticulated resins are inherently "stable" in non-aqueous liquids.

> A final characteristic of the resin when used to remove iodide compounds from non-aqueous, organic media, and one that is inherent in most ion exchange resins meeting the foregoing requirements, especially when the resin is specifically indicated to be designated for non-aqueous applications, is that the resin is stable in the organic medium from which the iodide compounds are to be removed. *By the term "stable," it is meant that the resin will not chemically decompose, or change more than about 50 percent of its dry physical dimension upon being exposed to the organic medium containing the iodide compounds.*

(Emphasis added.) Petitioners did not dispute that the resin in their accused process did not chemically decompose upon being exposed to acetic acid. Instead, attempting to take advantage of the absence of an express definition of the term "dimension" in the patent specification, they asserted that the particular resin used in the accused process "change[d] more than about 50% of its dry physical dimension" upon such exposure because its *volume* allegedly increased by more than fifty percent.

B. The Development Of The Infringing Guard Bed System

In 1990, acetic acid manufactured by petitioners caused an unintentional and sudden "deactivation" of the vinyl acetate catalyst used by their main acetic acid customer,

Union Carbide, due to iodide contamination in the acetic acid feed at a level of less than 200 parts per billion. The "upset" caused by that contamination forced petitioners to take a costly shut down of the 600 million pound per year Sterling plant, and further caused BP to pay a million dollars to Union Carbide to share the $2 million catalyst replacement cost.

Desperate to avoid future costly upsets, BP and Sterling scientists convened a self-described "brainstorming session" in August 1990 to devise a better way to reduce the total iodides in their acetic acid. Petitioners knew of the '806 patent at the time the infringement began. Pet. App. 23a. Petitioners also knew that the process claimed in Celanese's '806 patent would solve the iodide problem because one of the alternatives they considered was resolving the "Amberlyst® 15 patent situation to use it." Moreover, petitioners also realized that following that course of action would "probably require consultation with Hoechst Celanese." However, no such consultation or license with Celanese was ever accomplished.

After considering but rejecting a number of other alternatives, petitioners' scientists decided to use a silver charged guard bed containing a resin called Purolite C-145 in place of the Amberlyst® 15 resin disclosed in the '806 patent. Purolite C-145 resin was described by its manufacturer as a "macroporous" strong-acid cation exchanger resin made of a polymer matrix of sulfonated polystyrene with divinyl benzene, just as preferred in the '806 patent. Despite the manufacturer's classification and in the face of Sterling's admitted pre-trial understanding that the Purolite resin was indeed "macroporous," petitioners still asserted at trial that the resin in their accused process was not "macroreticulated" as used in the '806 patent. In addition, petitioners contended that the Purolite resin "chang[ed] more than about 50% of its dry physical dimension" upon exposure to acetic acid based on their own revisionist characterization of the term "dimension"

as signifying "volume" rather than being a linear measurement.

With those two concocted justifications as their only basis for asserting that they had achieved their alleged "goal" of preventing iodide contamination without infringing any patents, BP and Sterling then loaded the Purolite resin with silver, adopted the other parameters of the process claimed in the '806 patent, and commenced operation of the infringing guard bed. Suspicious that another method for removing iodide from acetic acid was in commercial use in the United States, Celanese analyzed Sterling's acetic acid revealing traces of silver and indicating that Sterling was using the guard bed process covered by Celanese's '806 patent.

On January 5, 1993, Celanese filed suit alleging infringement of the '806 patent against the petitioners in the United States District Court for the Southern District of Texas (Galveston Division) (Kent, J.). Petitioners answered and filed a declaratory judgment counterclaim, alleging that the '806 patent had been inequitably procured, was invalid for multiple reasons, and was not infringed.

C. The District Court And Jury Find Willful Infringement

The case was tried to a jury over a period of seven days. Pet. App. 3a. By the start of trial, the petitioners had conceded that the accused iodide removal process met all but two claim limitations: asserting only that the Purolite resin used in the accused process was neither "macroreticulated" nor "stable" as those terms were used in the '806 patent.

At trial, petitioners attempted to sustain their non-infringement position using tests involving measurements made after the Purolite resin was dried at 105°C under vacuum. As petitioners were well aware, such high temperature functions to artificially "collapse" the pores in

the accused resin and was well above the maximum temperature of 40°C to which resin used in the infringing process was permitted to be exposed under BP's own specification, which cautioned that excessive temperatures could damage the resin. In other words, the material "tested" to support BP's non-infringement case was resin in a form that was "out of specification" and which was never used to remove iodide at the Sterling plant. Based on such unrealistic test results, petitioners argued that the Purolite resin was actually a "gel" that had no pores and whose "porosity depended essentially upon swelling." Not surprisingly, the jury rejected petitioners' assertions.

At the close of Celanese's case, the petitioners moved for directed verdict of no infringement, which was denied. Before the jury was instructed, they renewed their objection to the district court's instructions on the doctrine of equivalents on grounds that the doctrine presented an equitable determination that could only be made by the court.[2] After the jury's verdict, petitioners moved for JMOL, seeking to overturn the jury's conclusions on infringement, willfulness, and validity. In rejecting the petitioners' assertions of error, the district court (Judge Kent) outlined and followed the proper standard of review:

> [A] party must show (1) that reasonable persons, in light of the evidence before them, could not have found the facts necessary to support the jury's verdict; or (2) that the facts properly found cannot in law support that verdict. In reviewing factual findings, the Court must consider all of the evidence, in the light most favorable to the non-movant, drawing reasonable inferences, without simply substituting

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[2] That contention was based on arguments raised by the appellant in a case that was then pending before the en banc Federal Circuit. Subsequently, that position was rejected in *Hilton Davis Chem. Co. v. Warner-Jenkinson Co.*, 62 F.3d 1512, 1520-21 (Fed. Cir. 1995), *cert. granted*, 116 S. Ct. 1014 (No. 95-728) (1996) (hereinafter "*Hilton Davis*").

> its choice for that of the jury between conflicting elements in the evidence. In reviewing the legal conclusions implicit in the verdict, the Court should review *de novo* the legal issues supporting the verdict.

Pet. App. 20a (citations omitted). The district court independently reviewed the evidence and confirmed that the jury's verdict was supported by substantial evidence and in accordance with the proper legal standards. Pet. App. 20a-25a.

1. *Invalidity And Unenforceability*

The jury rejected each of the petitioners' invalidity defenses. Pet. App. 18a. In upholding the jury's validity determinations, Judge Kent sternly noted that "in light of the evidence adduced at trial, Defendants' request for judgment on these issues is absurd." Pet. App. 24a. Petitioners also filed a motion for judgment on the issue of inequitable conduct, which Judge Kent also rejected. Pet. App. 25a-27a. All of those issues were later abandoned on appeal.

2. *Infringement*

In post-trial motions before the district court, the petitioners argued that there was not substantial evidence to support the jury's finding that the Purolite resin used in the accused process was "macroreticulated" and "stable" as required by the '806 patent. Pet. App. 20a. Rejecting petitioners' merely "colorable argument" and "exceedingly dubious" evidence that the Purolite resin is not macroreticulated, Judge Kent held that "[t]he jury properly rejected such an overly strained interpretation of the claims of the '806 patent, as the evidence overwhelmingly supported a contrary conclusion." Pet. App. 20a-21a.

With respect to the term "stable", the district court reviewed the evidence and easily concluded that "substantial evidence supports a conclusion that Purolite C-145

is 'stable' within the literal meaning of the '806 patent." Pet. App. 22a. In reaching that conclusion, the court relied on the fact that construing the patent to have "a limitation of 50% volume swelling would lead to the improbable result that the patent's own 'best mode' resin —Amberlyst 15—is excluded from the scope of the patent." Pet. App. 22a. Thus, the district court affirmed the jury's finding that the '806 patent was literally infringed.

Celanese submitted a proposed jury form that had separate questions on infringement literally and under the doctrine of equivalents. However, the petitioners' proposed form asked only whether there was infringement of particular claims. Judge Kent notified the parties that he would instruct the jury on both infringement issues and also informed them that he would submit petitioners' single infringement question on each asserted claim to the jury. Apart from objections to the jury being instructed on the doctrine of equivalents at all and to certain aspects of that charge, the petitioners did not object to the actual infringement jury question that was submitted to the jury on grounds that it did not sever the literal infringement issue from infringement under the doctrine of equivalents.

The petitioners' JMOL motion again objected to the jury having been given the doctrine of equivalents issue. Consequently, Judge Kent independently reviewed the evidence and entered his own findings on that issue. Pet. App. 22a-23a. After reciting the "function-means-result" test set forth in *Graver Tank & Mfg. Co. v. Linde Air Products Co.*, 339 U.S. 605, 608 (1950), he noted that the evidence of the volumetric swelling of the Purolite resin presented "the only reasonably arguable distinction" between the accused process and that described in the '806 patent. Pet. App. 22a. Recognizing that the other limitations were met "just as described in the patent," Judge Kent held:

> Even if Defendants' resin choice did not literally infringe the '806 patent, the Court cannot envision circumstances which would more clearly qualify for the protection of *Graver*: the Defendants' process performs the *identical* function of the '806 patent, to achieve *identical* results, by almost (if not literally) the *identical* means.

Pet. App. 22a-23a (emphasis in original). Accordingly, the district court found "the jury's verdict of infringement to be "overwhelmingly supported by the evidence." Pet. App. 23a. Judge Kent then alternatively and independently entered his own finding of infringement under the doctrine. Pet. App. 23a.

3. *Willful Infringement And Damages*

The jury also found petitioners' infringement to be willful. After rejecting petitioners' challenge to the sufficiency of the evidentiary basis for that determination, Pet. App. 23a-24a, Judge Kent subsequently exercised his discretion to award double damages under 35 U.S.C. § 284 for the willfulness. He specifically agreed with the jury's implicit rejection of petitioners' contention that they acted in good faith. Pet. App. 28a.

In doing so, he cited "Defendants' [blatant attempt] to avoid an arguably literal interpretation of one relatively unimportant limitation of the '806 patent, with no concern for the fact their process was clearly the legal equivalent of the invention claimed by the patent" and petitioners' failure to present any evidence that they had sought or obtained the competent advice of legal counsel prior to commencing their infringing process. Pet. App. 28a (also noting that petitioners "pursued numerous defenses which could be generously described as weak").

As damages for the infringement, the jury awarded Celanese a royalty rate of 0.6 cents per pound of acetic acid produced by the infringing process. Judge Kent

also denied petitioners' request for a 10-fold decrease in damages as an alternative to a new trial. No issues related to damages were raised by either party on appeal.

D. The Federal Circuit's Affirmance

In light of the dubious nature of the petitioners' tests on grossly overheated resin samples, it is little wonder that the jury and the district court did not accept petitioners' assertion that the resin in its accused process was not "macroreticulated" for purposes of avoiding infringement of the '806 patent. On appeal, the petitioners abandoned that position altogether, leaving the only disputed claim limitation before the Federal Circuit as being whether the resin in the accused method was "stable" as required by the '806 patent claims.

Notably, the petitioners did not raise any of the adverse determinations on invalidity or unenforceability on appeal to the Federal Circuit. Thus, even though the jury and district court agreed with Celanese's claim interpretation, the petitioners effectively conceded before the Federal Circuit that there was no arguable basis on which to advance any assertions that the claims at issue were invalid or unenforceable, even when "stable" is interpreted to cover changes of 50% in linear dimension. For that reason, it is clear that petitioners' artificial and unsupported interpretation of "dimension" is not required by the prior art or by the understanding of those of ordinary skill in the relevant art. Instead, it was simply a *post hoc*, litigation-inspired "word game" created by petitioners in hopes of avoiding liability for a clear case of literal infringement.

1. The Meaning Of The Term "Stable"

The appeal in this case was argued and decided after the Federal Circuit's *in banc* decision in *Markman v. Westview Instruments, Inc.*, 52 F.3d 967 (Fed. Cir.

1995), *aff'd*, 116 S. Ct. 1384 (1996), but before this Court's affirmance. In *Markman*, the Federal Circuit pronounced that claim interpretation is a matter of law for the court which is to be reviewed *de novo* on appeal without deference to the trier of fact. *See* Pet. App. 4a. In this case, the Federal Circuit recognized that the dispute over the interpretation of the term "dimension" was dispositive of the issue of infringement, which turned on the scope and meaning of the term "stable" in the claims at issue. Pet. App. 4a. Thus, the Federal Circuit properly undertook a *de novo* determination of the meaning of that term as used in the '806 patent. *Id.*

The Federal Circuit properly began its analysis from the premise that "[a] technical term used in a patent document is interpreted as having the meaning that it would be given by persons experienced in the field of invention, unless it is apparent from the patent and the prosecution history that the inventor used the term with a different meaning." Pet. App. 4a (citing *ZMI Corp. v. Cardiac Resuscitator Corp.*, 844 F.2d 1576, 1579 (Fed. Cir. 1988), and *Intellicall, Inc. v. Phonometrics, Inc.*, 952 F.2d 1384, 1387 (Fed. Cir. 1992)). As the court properly recognized, the meaning of the disputed term "stable" depended on the meaning of "dry physical dimension" as contained in the specification's definition of "stable." Pet. App. 5a.

The Federal Circuit noted that a court is to consider extrinsic evidence (including expert testimony) only for the purpose of explaining the technology and technical terms found in the patent. Pet. App. 5a (citing *Markman*, 52 F.3d at 931). The Federal Circuit cited the testimony of Celanese's technical expert that "there is no such thing as volume dimension." Pet. App. 6a. The court of appeals also quoted contrary testimony from petitioners' expert expressing his personal belief that "stable" refers to volume because it is difficult to measure the diameter of

a single resin bead and because the patent distinguishes between macroreticulated resins and gel resins. *Id.* Stating that the dictionary definitions cited by each side were not by themselves dispositive of the disputed meaning, the Federal Circuit noted that general dictionary definitions are secondary to the specific meaning of a technical term as it is used and understood in a particular technical field. Pet. App. 7a.

In that light, the Federal Circuit characterized the testimony of Dr. Hilton, the inventor, as "read[ing] as that of an expert in the field." Pet. App. 8a. The court favorably quoted his testimony that "dimension is a distance. A dimension is not a volume." Pet. App. 7a. As part of its *de novo* determination, the Federal Circuit also relied on portions of Dr. Hilton's cross-examination testimony beyond that which had been directly quoted in the parties' briefs.

> Q: When did you first form a view that dimension means something other than volume dimension, dimension in this definition of stable?
>
> A: I have never thought of volume as being a dimension. . . . [V]olume is not a dimension. . . . Dimension is a distance.
>
> Q: You've never heard the term "volume" used as a dimension?
>
> A: No.
>
> Q: Yet you consider the volume expansion in order to design a guard bed, do you not?
>
> A: Yes, you do.
>
> Q: How many dimensions does volume have?
>
> A: Volume has three dimensions.

Pet. App. 8a. The Federal Circuit noted the district court's view that Dr. Hilton was "highly credible." Pet. App. 8a; Pet. App. 27a. Contrary to the central mistaken premise of the petition, the Federal Circuit did not find

his testimony dispositive, stating instead that it "treated Dr. Hilton's testimony as cumulative to the other evidence, and as enlarging our understanding of the technology and the usage of the disputed terms." Pet. App. 9a.

The Federal Circuit further noted that the '806 patent specification shows the resin characteristic of mesh size of the dry resin, a linear measurement based on diameter. Pet. App. 9a. Because Celanese's preferred resin was shown to swell by more than 50% in volume in acetic acid, the district court had observed that petitioners' interpretation of "stable" would exclude Celanese's preferred embodiment from the literal scope of the claims. Pet. App. 9a; Pet. App. 22a. The Federal Circuit agreed with that analysis, holding it "unlikely that an inventor would define the invention in a way that excluded the preferred embodiment, or that persons of skill in this field would read the specification in such a way." Pet. App. 9a (citing *Modine Mfg. Co. v. United States Int'l Trade Comm'n*, 75 F.3d 1545, 1550 (Fed. Cir. 1996) (a claim interpretation that would exclude the inventor's device is rarely the correct interpretation)).

After making its own *de novo* consideration of the '806 patent claims and specification, the parties' evidence, and the parties' assertions, the Federal Circuit agreed with the district court and the jury that "dimension" was properly interpreted as being a linear measurement.

> We find that *the more reasonable explanation is that volume has three dimensions,* and we give weight to the argument that on the BP definition the Celanese preferred embodiment would not be within the claims of the Celanese patent. Thus we conclude that "dry physical dimension" as used in the specification means linear dimension. On this definition of dimension, and defining "stable" accordingly, the claims read literally on the BP process.

Pet. App. 10a-11a (emphasis added). Finally, the Federal Circuit rejected petitioners' claim to be entitled to a

presumption of noninfringement because they were allegedly practicing a process that was separately patented. Pet. App. 13a-14a.

2. ***The Doctrine Of Equivalents***

Having affirmed the district court's judgment on grounds of literal infringement, the issue of infringement under the doctrine of equivalents was no longer necessary to the infringement judgment. Nevertheless, the Federal Circuit went on to address how the issue of infringement under the doctrine had been presented to the jury "in the interest of complete review." Pet. App. 10a.

First, the Federal Circuit rejected petitioners' contention that the doctrine of equivalents issue was an equitable issue which should not have been submitted to the jury. Pet. App. 10a. Next, the Federal Circuit dismissed petitioners' objections to the manner in which the case was submitted to jury by holding that petitioners "by [their] acquiescence in and indeed proposal of the verdict form waived objection to the verdict form" and further holding there was no error in the jury instructions. Pet. App. 11a. The Federal Circuit then rejected petitioners' argument that Celanese did not present sufficient evidence of equivalency on grounds that the petitioners did not preserve that issue before the case went to the jury by filing a properly made motion for directed verdict at the close of all the evidence. Pet. App. 11a-12a.

Petitioners' multiple procedural attacks on the manner in which the doctrine of equivalents was given to the jury were clearly designed to avoid the district court's substantive conclusions that infringement was "overwhelmingly supported by the evidence." Pet. App. 23a. As noted, the district court made its own independent review of the evidence and made clear that it "cannot envision circumstances which would more clearly qualify for the protection" of the doctrine. Pet. App. 22a. Having

reviewed the entirety of the proceeding, the Federal Circuit found no basis for reversing or granting a new trial on the issue of infringement.[3] Pet. App. 13a.

REASONS FOR DENYING THE WRIT

There is no reason for this Court to grant certiorari to review the propriety of the Federal Circuit's decision in this case, which only concerns the proper meaning of the phrase "dry physical dimension" as found in the specification's definition of the single disputed claim term "stable" in the '806 patent. On its face, the petition complains only of the case-specific finding that the petitioners infringed Celanese's '806 patent—a result which was identically and independently reached by the jury, by the district court, and by the Federal Circuit. Because every decisionmaker that has considered this case has reached the same result, BP's petition clearly does not present either a difficult or controversial issue worthy of this Court's attention.

Nevertheless, petitioners are asking this Court to grant certiorari in order to rule as a matter of law that the term "stable" must be construed in accordance with the same meaning of "dimension" that the petitioners have failed to convince the court of appeals, the district court or the jury was correct. The thrice-reached conclusion that "dimension" is properly construed in accordance with its ordinary meaning of being a one-dimensional "length" rather than three-dimensional "volume" is eminently reasonable. More importantly, it is entirely correct. Simply put, "volume" is not a dimension, it is the product of three dimensions. Without doubt, petitioners' artificial interpretation of the term "dimension" as somehow signifying "volume" was advanced solely for purposes of this

[3] The Federal Circuit also affirmed the jury's finding of willful infringement and the district court's decision to award double damages under 35 U.S.C. § 286. Pet. App. 14a-17a. No issues related to those issues are raised by the petition.

litigation and has been properly rejected throughout this case.

No possible justification has been shown for this Court to revisit that single claim interpretation issue in this case on a petition for certiorari. Moreover, the finding of literal infringement compelled by that correct claim construction renders the second question presented regarding the doctrine of equivalents irrelevant. In light of the finding of literal infringement, any pronouncement by this Court concerning the doctrine of equivalents in this case or in *Hilton Davis* cannot alter the judgment of infringement in this case. Thus, the petitioners' alternative and unsupported suggestion that the denial of this petition be delayed until after this Court renders a decision in *Hilton Davis* should be rejected as nothing more than a baseless attempt to postpone a final and overdue conclusion to this case.

I. PETITIONERS' FIRST QUESTION PRESENTED WAS NOT ADDRESSED BELOW AND HAS NO BASIS IN THE RECORD

The first question posed by the petition is directed to whether the Federal Circuit somehow violated "the fair notice function" of section 35 U.S.C. § 112 when it interpreted the terms of the '806 patent after considering extrinsic evidence (such as the expert testimony presented by both sides). Petitioners concede that courts often must examine extrinsic evidence—including expert testimony, dictionaries, and scientific articles—in order to determine the proper meaning of technical terms and language in a patent document. Pet. 14-15. Because that is all that occurred in this case, the entire premise of petitioner's first question is without basis in the record.

As petitioners concede before this Court, they stipulated before trial that section 112 was complied with in this case (*see* Pet. 5 n.3), so Celanese's compliance with the requirements of section 112 was not raised in or resolved by the district court or by the jury. Petitioners' feeble

suggestion to this Court that their stipulation should be excused because it was based on their own unilateral interpretation of the '806 patent is patently ridiculous. A petition for certiorari is not the proper vehicle by which an unsuccessful litigant may obtain relief from a clear stipulation or attempt to raise new issues where its arguments presented below have been soundly and repeatedly rejected.[4] By requesting this Court to consider a new issue in the first instance on a petition for certiorari, petitioners' first question can be declined on that basis without more.

Moreover, petitioners no longer have any basis for asserting that their actions or their interpretation of the '806 patent were reasonable. An alleged infringer may defend against a charge of willful infringement by showing that it had a reasonable basis for proceeding with its infringing activity. *See, e.g., American Med. Sys., Inc. v. Medical Eng. Corp.*, 6 F.3d 1523, 1531 (Fed. Cir. 1993), *cert. denied*, 114 S. Ct. 1647 (1994). In this case, however, the jury, the district court, and the court of appeals have already found that petitioners *did not* have a reasonable basis for believing that they would not be held liable for infringing the '806 patent. Yet petitioners seek to have this Court undo that result by suggesting that a third *de novo* review of the same record will cause this Court to disagree with everything that has occurred to date in this case.

Because no issue regarding willful infringement is raised in the current petition, petitioners' repeated reliance before this Court on their alleged "good faith" in attempting to construe the '806 patent and to avoid infringing has absolutely no basis in law or fact and thus should

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[4] *See, e.g., Delta Airlines, Inc. v. August*, 450 U.S. 346, 362 (1981) ("question presented in petition but not raised in court of appeals is not properly before us"); *Youakim v. Miller*, 425 U.S. 231, 234 (1976) ("ordinarily, this Court does not decide questions not raised or involved in the lower court").

simply be ignored. In practical effect, the jury, the district court, and the court of appeals have agreed that the petitioners did not "inadvertently invade existing patent rights" (Pet. 14), did not "construe the patent claims in good faith" (Pet. 17), and could not have reasonably understood "dimension" as used in the '806 patent to mean "volume" (Pet. 4). In other words, petitioners' proffered view that "dimension" means "volume" now stands as conclusively rejected as unreasonable on the basis of the now-unchallenged finding that petitioners willfully infringed the '806 patent.

II. THE FEDERAL CIRCUIT CORRECTLY INTERPRETED "DIMENSION" AS BEING A LINEAR MEASUREMENT RATHER THAN A VOLUME

The petitioners attempt to portray the present case as presenting a new issue left unaddressed by the decisions of this Court and the Federal Circuit in *Markman v. Westview Instruments, Inc.*, 52 F.3d 967 (Fed. Cir. 1995), *aff'd*, 116 S. Ct. 1384 (1996), which held that claim interpretation is a matter of law to be decided by the court rather than the jury. However, the Federal Circuit decided this case after its own *Markman* decision, and did so with full awareness of its teachings, implications, and requirements. As shown by the face of the Federal Circuit's opinion, that court made a determination of the proper meaning of the disputed claim term, and concluded that the "more reasonable" interpretation is that volume has three dimensions. Pet. App. 9a. In accordance with that conclusion, a "stable" resin for purposes of the '806 patent is one that changes by about 50% or less of its dry physical *linear* dimension upon being exposed to acetic acid.

Viewed in that light, this Court can reject petitioners' attempt to take advantage of the recent observation by the Federal Circuit in *Athletic Alternatives, Inc. v. Prince Mfg., Inc.*, 73 F.3d 1573, 1581 (Fed. Cir. 1996), that "[w]here there is an equal choice between a broader and a narrower meaning of a claim . . . we consider the notice

function of the claim to be best served by adopting the narrower meaning." *See* Pet. 11 n.5. Regardless of the correctness of that statement as a maxim of claim construction, it has no applicability to this case. By expressly concluding that Celanese's interpretation is the "more reasonable" one, Pet. App. 9a, the Federal Circuit's analysis and conclusion demonstrates that petitioners' characterization of its interpretation as being "equally plausible" with the one adopted by both lower courts and the jury is baseless.[5]

As properly recognized by the Federal Circuit, terms in patent claims are to be given their ordinary meaning unless it appears that the inventor used them differently. Pet. App. 4a (citing *ZMI Corp.*, 844 F.2d at 1579); *see also Intellicall, Inc.*, 952 F.2d at 1387 ("terms in a claim are given their ordinary meaning to one of skill in the art unless it appears from the patent and file history that the terms were used differently by the inventors"). As noted, the term "dimension" is in the specification's definition of the claim term "stable," but "dimension" itself is not separately defined in the '806 patent. However, the absence of an express or novel definition for "dimension" only means that it should be interpreted as having its ordinary and common meaning.[6] That is exactly what the jury and the lower courts did.

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[5] At Pet. 16 n.7, petitioners criticize the Federal Circuit for "[finding] it necessary to rely on the evidence presented at trial and to credit certain evidence over other evidence." Pet. App. 6a (conceding that the appellate judges were not personally qualified to know all terms related to macroreticulated cation-exchange resin technology). However, this Court recognized that "credibility judgments have to be made about the experts who testify in patent cases" and that "any credibility determinations will be subsumed within the necessary sophisticated analysis of the whole [patent] document." *Markman*, 116 S. Ct. at 1395. Thus, no fault exists in either the Federal Circuit's efforts or analysis in that regard.

[6] For that reason, the assertion at Pet. 17 that the '806 patent is "defective" because it fails to provide an express definition for the term "dimension" is contrary to accepted law. In any event,

There is no legitimate question that the Federal Circuit correctly concluded that "volume" has three dimensions and is not a dimension itself. Pet. App. 9a. Petitioners' assertion that the Federal Circuit's claim interpretation was based on testimony that was not available to the public as to the inventor's alleged intent when describing his invention (Pet. 11) is simply false. As the Federal Circuit explained, Dr. Hilton's testimony was considered by that court in the context of his being an expert in the field, not as providing evidence of a secret meaning of the disputed claim term. Pet. App. 8a. Moreover, that court further stated that his testimony was "cumulative" to the other evidence, and simply served to enlarge their understanding of the technology and the disputed terms. Pet. App. 9a.

Consideration of such testimony is well within a court's discretion when fulfilling its task to interpret the claims of a patent. *See Markman*, 52 F.3d at 980-81. Similarly, Dr. Dasgupta, another expert in the field of ion-exchange resins, testified on that when the term "dimension" was used in patents to describe a spherical resin, the term typically refers to the resin's diameter, in accordance with its ordinary meaning. Dr. Dasgupta further testified that there was no such thing as "volume dimension." Moreover, as explained by Dr. Hilton, "dimension is a distance. A dimension is not a volume." Pet. App. 7a.

Dr. Hilton's trial testimony was not provided to alter the meaning of the terms in the '806 patent, it served to confirm the understanding of those skilled in the art that the disputed term retained its ordinary and common meaning. That testimony was not about his individual views or to an allegedly secret intention, but reflected his knowledge as an expert that no one in the art used the term "dimension" as signifying volume. *See* Pet. App. 8a.

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no invalidity issue regarding whether the '806 patent is "defective" was raised before the Federal Circuit, and no such issue can be raised before this Court.

Thus, petitioners' assertion that the dispute over the meaning of "dimension" turned on extrinsic evidence that would not have been generally available to members of the public attempting to construe the '806 patent is a red herring.

The dictionary leaves no doubt that the term "dimension" signifies a *linear* measure: "measure in one direction; *specif*: one of three coordinates determining a position in space or four coordinates determining a position in space and time." *Webster's Ninth New Collegiate Dictionary*, at 355 (1988). Similarly, the dictionary definition of "volume" confirms that it is the product of three dimensions, not a dimension itself. *Id.* at 1321 ("the amount of space occupied by a three-dimensional figure as measured in cubic units"). Celanese provided such definitions as being illustrative of the ordinary meanings of such terms.

Admittedly, petitioners were able to find one dictionary that included "volume" within its definition of "dimension." *See* Pet. App. 7a (citing *Concise Oxford Dictionary of Current English* at 327 (8th ed. 1990)). The parties' contrasting definitions prompted the Federal Circuit to deem the dictionary evidence as non-dispositive. Pet. App. 7a. However, this Court can take judicial notice that the great weight of authority in common and technical dictionaries confirms that the accepted meaning of "dimension" does not include "volume."[7] More importantly, this Court can also take notice that the most recent edition of the dictionary cited by petitioners no longer includes "volume" within its accepted definition of "dimension." *See Concise Oxford Dictionary of Current English* at 378-79 (9th ed. 1995).

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[7] *See, e.g.*, Fed. R. Evid. 201(f) ("[j]udicial notice may be taken at any stage of the proceeding"); *Nix v. Hedden*, 149 U.S. 304, 306 (1893) (a court is bound to take judicial notice of the ordinary meaning of a word and "upon such question dictionaries are admitted, not as evidence, but only as aids to the memory and understanding of the court").

The disputed phrase in the specification's definition of "stable" requires that the resin in question not "change more than about 50 percent of its *dry* physical dimension upon being exposed to the organic medium." As the Federal Circuit noted, the specification "shows the resin characteristic of mesh size of the dry resin, a linear measure based on diameter." Pet. App. 9a. Petitioners assert that "the Federal Circuit's reliance on the mesh size reference has no support in the record." Pet. 6 n.4. However, the source of the Federal Circuit's reference is the '806 patent specification itself, which is clearly of record and which is required to be read and interpreted by the court with or without supporting testimony of a witness. *See Markman*, 116 S. Ct. at 1394-96; 52 F.3d at 979-80.

Finally, Dr. Hilton's testimony that use of Amberlyst 15 in his preferred embodiment falls within the scope of his patent is not remarkable. As recognized by the Federal Circuit and the district court, it would be a rare patent indeed that did not cover what the inventor believed to be the best way of carrying out the claimed invention. Pet. App. 9a; Pet. App. 22a. In this case, the test data showing that Amberlyst 15 swells more than 50% in volume was submitted by the petitioners. Now, petitioners assert that this Court should ignore that evidence because the tests were run after the time that the '806 patent was filed. Pet. 12 n.6. However, the improbability which both lower courts rejected was that the '806 patent would not have defined useful resins for the claimed process using terms that clearly risked excluding the inventor's preferred embodiment.

Stripped of its implicit and false assumption that "dimension" can be reasonably interpreted as being volume, the premise for the petition vanishes. As found by the jury, the district court, and the Federal Circuit, petitioners' noninfringement position in this case was founded on bogus test results and a linguistic strawman. If willful

infringers are allowed to create unsupported definitions of ordinary words found in patents as a means to avoid literal infringement, then claim interpretation will indeed become an unpredictable game. Because that is exactly what the Federal Circuit and this Court foreclosed in *Markman*, petitioners' attempt to perpetuate its linguistic gamesmanship in this case should be rejected by denying the petition.

III. THE QUESTION PRESENTED AS TO THE DOCTRINE OF EQUIVALENTS COULD NOT ALTER THE JUDGMENT, IS MERITLESS, AND PREMATURE

Because the finding that the '806 patent was literally infringed by the petitioners reached by the jury, the district court, and the Federal Circuit is based on a completely correct claim interpretation, this Court has no reason to reach or even consider the petitioners' second question presented concerning infringement under the doctrine of equivalents. Consideration of the doctrine of equivalents is only reached if a patent is found not to be literally infringed. *See, e.g., Graver Tank*, 339 U.S. at 607-08. Because this Court has been provided no reason to disturb the former determination, it surely has no reason to reach the latter question where a decision on that issue will not alter the judgment of infringement entered in this case.

The sole basis for petitioners' noninfringement position, even under their claim interpretation, was their thoroughly-discredited swelling tests in which the pores in the accused Purolite resin were artificially collapsed by overheating in direct conflict with petitioners' own specification. The district court held that the jury could easily have disregarded that "extremely dubious" evidence. Pet. App. 21a. On appeal, the petitioners removed that evidence from direct review by the Federal Circuit by dropping their contention that the accused resin was not "macro-

reticulated." Pet. App. 3a. Thus, if the present judgment on literal infringement were vacated, Celanese would clearly be entitled to demonstrate in the district court on remand that petitioners' alleged evidentiary basis for asserting that their resin increased 100% in volume had no legitimate basis in fact when the resin was prepared properly for use in the accused or claimed process. Petitioners' use of flawed tests to support their "revisionist" science cannot be allowed to establish noninfringement under any claim interpretation.

Moreover, even if literal infringement were not found on remand under the petitioners' claim interpretation, Celanese would still be entitled to prove that infringement under the doctrine of equivalents is appropriate. In actuality, Celanese has already done so because the district court expressly found that infringement under the doctrine of equivalents was entirely appropriate even if the term "stable" were interpreted as referring to volumetric changes. Pet. App. 22a.

> Alternatively, to the extent that this finding [on the doctrine of equivalents] is within the exclusive province of the Court, the Court independently finds infringement. To hold otherwise would permit Defendants "to make unimportant and insubstantial changes and substitutions in the patent which, though adding nothing, would be enough to take the copied matter outside the claim, and hence outside the reach of law."

Pet. App. 23a (quoting *Graver Tank & Mfg. Co. v. Linde Air Products*, 339 U.S. 605, 608 (1950) (footnote omitted)). On appeal, the Federal Circuit found no basis for reversing that result or for remanding that issue to the district court for a new trial. Pet. App. 10a-13a.

The district court made its alternative finding under the doctrine of equivalents in recognition that the issue of whether the doctrine of equivalents was an issue for the court or the jury was currently pending before the full

Federal Circuit. Pet. App. 23a n.1. Subsequently, the full Federal Circuit decided in *Hilton Davis* that the issue of infringement under the doctrine of equivalents is properly submitted to the jury as a question of fact. 62 F.3d at 1522. However, whether the issue is ultimately determined by this Court to be an issue for decision by the court or by the jury will not affect the outcome of this case because the jury and the courts have reached the same result on that issue in this case.

On the merits of the doctrine of equivalents issue, petitioners offer no basis for disagreeing with the findings of the jury and the lower courts and they do not directly challenge the Federal Circuit's well-reasoned determinations that petitioners waived or failed to prove their procedural objections. Instead, petitioners apparently hope that this Court will simply abolish the doctrine of equivalents in the *Hilton Davis* case. Because literal infringement exists in that case, that hope is irrelevant to this petition. In any event, any question regarding application of the doctrine of equivalents in this case would be wholly unnecessary at the present time because the issue could still be addressed, if necessary, in a subsequent appeal following the judgment on remand. Thus, the second question presented by the petition is meritless, premature, and cannot be used as a basis either for granting or delaying denial of this petition.

CONCLUSION

The petition for a writ of certiorari should be denied.

Respectfully submitted,

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